

Symmetric Form of the Nucleonic Equation

2189:
 Zaikov, Raiko. Symmetrische Form der Nukleonen-
 Gleichung. Izvestiya Bulgar Akad. Nauk. Otd. Fiz.-
 Mat. Tehn. Nauk Ser. Fiz. 6 (1957), 3-11 (Bulgarian
 Russian and German summaries)

2
 I-FW

A generalization of the Dirac equation for nucleons is proposed in which the wave function has eight components (of which the first four describe charged, and the second four uncharged, nucleons) but there are three coordinates in addition to those of space-time. The equation is

$$(\Gamma_j D_j + A_0) \psi = 0,$$

$$D_j = \partial_j - \frac{e}{\hbar} (i\phi_j + \Gamma_k \Gamma_l \phi_{jkl} + \Gamma_k \Gamma_l \Gamma_m \Gamma_n \phi_{jklmn}), \quad e = e/c,$$

where the Γ_j are hermitean matrices satisfying

$$\Gamma_j \Gamma_k + \Gamma_k \Gamma_j = \delta_{jk} \quad (j, k = 1, \dots, 7),$$

the $\phi_j, \phi_{jkl}, \phi_{jklmn}$ are arbitrary functions of an isotopic three vector k and a certain number of space-time field functions and their first derivatives (π -meson field, electromagnetic fields, etc.). It is assumed that

$$\psi = (\xi_1 \xi_2 \xi_3 \xi_4) \exp i\mathbf{k} \cdot \mathbf{r}.$$

where $\xi = (\xi_1, \xi_2, \xi_3, \xi_4)$. The physical interpretation of quantities of the form $\omega^\dagger A \omega$ is discussed for A certain products of the Γ 's. A. S. Wightman (Princeton, N.J.)

ZAIKOVA, V. A.

② 3
Dependence of the Coercivity of Magnetically Soft
Materials on the Thickness of the Lamination. V. A.
Zaikova & Ya. S. Shur. (C. R. Acad. Sci. U.R.S.S., Int.
FEU, 1934, Vol. 14, No. 4, pp. 662-663. In Russian.)
Experimental investigation of the coercivity of lamina-
tions of Fe, Ni, Fe-Ni alloys with 16-87% Ni, and Fe-Si
alloys with 1-4% Si. In all cases but one, a critical
thickness between 0.03 and 0.07 mm was found, below
which the coercivity increases very rapidly. The results
are shown graphically and are tabulated.

FALCHIN, I.V., FILIPPOV, A.I., KULYUKIN, M.M., PONTIKOV, R.M., SCHERBAKIN, Yu.A.,
GULYAYEV, R.M., TSUPKO-SITNIKOVA, V.M., ZAINIDROGA, O.A.

"Muon-Nucleon Interaction Constants and Muon Capture in RE^3 "

report presented at the Intl. Conference on High Energy Physics, Geneva,
4-11 July 1962

Joint Institute for Nuclear Research
Laboratory of Nuclear Problems

BULGARIA

ZAIMOV, K., Department of Psychiatry at the Higher Medical Institute in Sofia (Department head: Academician G. UZUNOV); and KISELINCHEVA, V., Department of Psychology at the Faculty of Philosophy and History, Sofia University (Department head: Prof G. PIR'OV)

"Observations on the Memory State of Students During Examinations."

Sofia, Nevrologiya, Psikhatriya i Nevrokhirurgiya, Vol 5, No 2, 1966, pp 135-138

Abstract [authors' Russian and English summaries, modified]: Observations are reported on 623 medical, education and philosophy students, 133 of them (21.35 percent) having displayed faulty memory. The authors distinguish quantitative and qualitative memory errors and give detailed classification and percentages for the various cases observed. One Western and ten Soviet-bloc references. Manuscript received in May 65.

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ZAINOV, K.

ZHIVKOV, M.; ZAINOV, K.

Variations of ocular pressure during insulin and electric shock therapies of mental diseases. *Sovrem. med.*, Sofia 5 no.1:31-37 1954.

1. Iz Klinikata po psikhiatriia (zaveshdashch: prof. G.Usunov) i Klinikata po ochni bolesti (zaveshdashch: dots. Danilov) pri Meditsinskata akademiia V.Chervenkov, Sofia.

(EYE,

*pressure, in insulin & electric shock ther.)

(SHOCK THERAPY,

*ocular pressure variations during electric & insulin ther.)

ZAIMOV, K.

Phase manifestations of the cerebral cortex; physiopathology of the cerebral cortex following electric shock, aphasia, apraxia and agnosia. Suvrem. med., Sofia 5 no.9:54-61 1954.

1. Iz Psikhiatrichnata klinika pri Meditsinskata akademi
V.Chervenkov, Sofia. Direktor: prof. G.Uzunov.

- (CEREBRAL CORTEX, pathology,
in agnosia, aphasia, apraxia & electric shock)
- (AGNOSIA, pathology,
cerebral cortex)
- (APHASIA, pathology,
cerebral cortex)
- (APRAXIA, pathology,
cerebral cortex)
- (ELECTRICITY, effects,
on cerebral cortex)

ZAIMOV, K.

ZHIVKOV, Evg.: ZAIMOV, K.: DAIKOV, P.-krushochnik

Reactivity of the pupils and ocular pressure in schizophrenia treated with insulin. Suvrem.med. Sofia no.6:24-29 '55.

1. Iz Ochnata klinika (direktor: dots. Danilov) i Nervnata Klinika (direktor: prof. G. Usunov) pri Visshia meditsinski institut V. Chervenkov-Sofia.

(SHOCK THERAPY, INSULIN, in various diseases, schizophrenia, eff. on pupils & ocular tension)

(SCHIZOPHRENIA, therapy, insulin shock, eff. on pupils & ocular tension)

(PUPILS, physiology, eff. of insulin shock ther. of schizophrenia)

(EYE, tension, eff. of insulin shock ter. of schizophrenia)

ZAIMOV, K.A.

Simultaneous function of both signal systems in phase correlations;
ultraparadoxical phase in associated effector reactions. Zhur.nevr.
i psikh. 55 no.3:176-181 '55. (MLRA 8:7)

1. Psikhiatricheskaya klinika (sav. prof. G.Usunov) meditsinskoy
akademii imeni V. Chernkova (Sofiya).
(CEREBRAL CORTEX, physiology,
signal systems, simultaneous funct.)

ZAIMOV, K.; GERANLIEV, B.; BELCHEV, D.; ZAIMOVA, S.

Observations on mental processes in patients with severe schizophrenic personality disorders during the course of occupational therapy.
Nauch. tr. vissh. med. inst. Sofia 39 no.6:115-132 '60.

1. Predstavena ot prof. G. Uzuncy, rukovoditel na Katedrta po psikhiaatria.

(OCCUPATIONAL THERAPY) (SCHIZOPHRENIA ther)

ZAIMOV, K.

On certain general aspects in the physiopathology of agnosia, apraxia, aphasia and thought disorders in schizophrenia (ultraparadoxical phase during the association of irritants and effective reactions). Suvrem med., Sofia no.9:66-72 '60.

L. Iz Katedrata po psikhiatriia pri VMI, Sofia (Rukov. na katedrata prof. d-r G.Uzunov)
(SCHIZOPHRENIA psychol)
(AGNOSIA)

STANILOVA, M.; MEVORAKH, E.; ZAIMOV, K.; TEMKOV, Iv.; SHIPKOVENSKI, N.

Recent comparative investigations on penicillin and malarial
therapy of progressive paralysis. Suvr. med. 14 no.5:33-39
'63.

(FEVER THERAPY) (PENICILLIN) (PARESIS)

ZAIMOV, K.; LIZHARDZHIEVA, TS.; PURVANOVA, TS. [Purvanova, TS.];
DABCHEV, P.

Seasonality of some phases of manic-depressive psychosis.
Zhur. nevrr. i psikh. 40 no.1:98-100 '65. (MIRA 18:2)

1. Kafedra psikhatrii (zaveduyushchiy - akademik G. Uzunov)
Vysshego meditsinskogo instituta i Gorodskoy psikhonevrologicheskiy
dispanser (glavnyy vrach L. Krastev), Sofiya.

ZAIMOV, K.A.

Transfer of induction relations of the ultraparadoxical phase in the differentiation of the motor analysor (perabiosis as a general pathophysiological basis of aphasia, apraxia, agnosia and incoherence of thought in schizophrenia). Zhur. nevr. i psikh 61 no.8:1204-1209 '61. (MIRA 15:3)

1. Kafedra psikiatrii (zav. -- prof. G. Uzunov) Vysshogo meditsinskogo instituta v Sofii.

(SCHIZOPHRENIA)
(NERVOUS SYSTEM--DISEASES)

ZAIMOV, K.K.; FIL'KOV, V.A.

Characteristics of organic matter in Chernozems of Moldavia.
Pochvovedenie no.10:68-72 '60. (MIRA 13:10)

1. Kishinevskiy gosudarstvennyy universitet.
(Moldavia--Chernozem soils)

ZAIMOV, K.K.; FIL'KOV, V.A.

Changes in the trend of humus formation in the forest soils of
Moldavia after plowing. Pochvovdenie no.4:87-92 Ap '63.

(MIRA 16:5)

1. Kishinevskiy gosudarstvennyy universitet.
(Moldavia--Forest soils) (Moldavia--Humus)

KHUBAVENKOVA, A.; ZAIKOVA, N.

Dilantin therapy of epilepsy in children. Suvrem. med., Sofia 8 no.11:
71-74 1957.

1. Iz Detskata psikhiatriczna bolnitsa--Sofia (Gl. lekar: A. Khubavenkova)
(HYDANTOINS, therapeutic use,
diphenylhydantoin in epilepsy in child. (Bul))
(EPILEPSY, in infant and child,
diphenylhydantoin ther. (Bul))

TEMKOV, Iv. i. ZAIKOVA, H.

Results of treatment of psychoses with serpasil. Suvrem. med., Sofia
9 no.9:29-33 1958.

1. Is Katedrata po psikiatriia pri VMI--Sofia (sav. katedra: prof.
G. Usunov).

(PSYCHOSES, ther.
reserpine (Bul))

(RESERPINE, ther. use
psychoses (Bul))

ZAIMOV, K.; GERANLIEV, B.; BELCHEV, D.; ZAIMOVA, S.

Observations on mental processes in patients with severe schizophrenic personality disorders during the course of occupational therapy.
Nauch. tr. vissh. med. inst. Sofia 39 no.6:115-132 '60.

1. Predstavena ot prof. G. Usunov, rukovoditel na Katedrata po psikhiaatria.

(OCCUPATIONAL THERAPY) (SCHIZOPHRENIA ther)

ZAIMSKIKH, M., starshiy radiotekhnik

Remote control with wire broadcasting stations. Voen. znan.
39 no.1:33 Ja '63. (MIRA 16:1)

1. Spasatel'naya sluzhba Moskovskogo gorodskogo komiteta
Dobrovol'nogo obshchestva soдейstviya armii, aviatsii i flotu.

(Moscow--Wire broadcasting)
(Remote control)

ZAINATULIN, R. N.

Fishing - Caspian Sea

Cooperative river fishing on the Northern Caspian, Ryb. Khoz. 29, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

SHONTAKOVSEIY, H.P.; KOMAROV, H.V.; MISTONAS, V.K.; ZALICHKOVSKAYA, H.K.

Nature of interaction between stannanol and the Iotolol reagent.
Izv. AN SSSR. Ser. khim. no.6:1102-1104. Ja '64.

(MIRA 17:11)

I. Institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

BUZHEVICH, G.A., kand. tekhn. nauk, nauchn. red.; ZAIONCHKOVSKIY,
B.F., kand. tekhn. nauk, nauchn. red.

[Instructions for manufacturing large products from foamed
slag concrete] Instruktsiia po izgotovleniiu krupnorazmer-
nykh izdelii iz termozitobetona (shlakopemzobetona). Mc-
skva, Izd-vo lit-ry po stroit., 1964. 51 p. (MIRA 17:3)

1. Moscow. Nauchno-issledovatel'skiy institut betona i zhele-
zobetona.

ZAIONCHKOVSKIY, B.F., kand. tekhn. nauk:

Determining the activity of building gypsum. Nov. v proizv. stroi.
mat. no.1:76-79 '59. (MIRA 12:12)
(Gypsum)

Zaionchkovskiy, B.F.

GULINOVA, L.S., kand.tekhn.nauk; ZAIONCHKOVSKIY, B.F., kand.tekhn.
nauk; TORCHINSKAYA, S.A., inzh.

Experimental manufacture of large gypsum concrete wall blocks.
Nov. v stroi. tekhn. no.12:91-109 '57. (MIRA 11:1)
(Concrete blocks)

LOTAREV, V.I., slesar' (Voronezh); SUYATINOV, N.G. (Voronezh);
ZAIONCHKOVSKIY, I.V. (Lyubertsy)

Efficiency suggestions made in the welding and assembly trust.
Stroi. truboprov. 8 no.1:22-23 Ja '63. (MIRA 16:5)
(Gas distribution--Equipment and supplies)

ZAIRAT'YANTS, V.B.

"Cortisone therapy" by John Harry Howard Glyn. Reviewed by
V.B. Zairat'iants. Probl.denok.i gorz. no.4:126-127 '62.

(MIRA 1:11)

(CORTISONE) (RHEUMATISM) (GLYN, JOHN HARRY HOWARD)

ZAIRAT'YANTS, V.B.

Changes in the neural apparatus of the lungs in acute radiation
sickness. Med. rad. 5 no.4:29-34 Ap '60. (MIRA 13:12)
(RADIATION SICKNESS) (LUNGS—INNERVATION)

ZAIR-ROK, A., Inzh.-kapitan 2-go razr. (1940), 1941, Kapitán 1-go razr.

Improve the training of naval specialists. Mor. sbor. 48 no.12:
30-35 D 164. (1976 12:12)

ZAIRI, M.D.

Problems of magma specialization and relationships between mineralization and intrusions in the southeastern part of the Lesser Caucasus. Uch.zap.AGU no.12:23-34 '57. (MIRA 12:1)
(Caucasus--Rocks, Igneous) (Caucasus--Ores)

15-57-2-1570
Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 2,
p 56 (USSR)

AUTHOR: Zairi, M. D.

TITLE: Contamination in the Dalidag Intrusive (K voprosu o
yavleniyakh kontaminatsii v Dalidagskom intrusive)

PERIODICAL: Uch. zap. Azerb. un-t, 1956, Nr 2, pp 29-32

ABSTRACT: Two phases of intrusive rocks are distinguished in
the Dalidag intrusive (central Azerbaidzhan): syenite-
diorite and quartz syenite. Xenoliths of the first
phase are well preserved in their original form and
outline. Rocks and xenoliths of the first phase are
characterized by a relatively higher content of apa-
tite (0.5 to 2 percent against 0.2 to 0.3 percent in
rocks of the first (sic) phase) and by rare porphy-
ritic segregations of orthoclase. Part of the apatite
may have formed by mechanical separation from the

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Contamination in the Dalidag Intrusive (Cont.)

15-57-2-1570

xenoliths; part may have developed because of extraction of CaO by the magma from the xenoliths (and from the host rock) and later precipitation in apatite. The orthoclase was apparently formed through migration of potassium into the xenoliths (and into the host rock). The author concludes by noting that all the varieties of rocks cannot be explained by assimilation of country rock by a magma. Assimilation on a large scale did not actually take place, and it is consequently necessary to consider it only on a limited scale.

Card 2/2

S. P. B.

ZAIRI, M. D.

Zairi, M. D. and Suleymanov, S. M. "On lode formations in the Dalidag intrusion," Doklady (Akad. nauk Azerbaydzh. SSR), 1949, No. 4 p. 164-66, (Resume in Azerbaijani)

SO: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 26, 1949)

ZAIRI, M.D.

Contamination phenomena in the Dalidag intrusion. Uch. zap AGU no.2:
29-32 '56.

(MIRA 10:4)

(Dalidag--Rocks, Igneous)

ZAIRI, M.D.

Geologic position of the acid intrusions in the southeastern part
of the Lesser Caucasus and some of their features in the background
of the Caucasus. Uch. zap. AGU. Geol.-geog. ser. no.2:45-50 '59.
(MIRA 14:6)

(Caucasus--Rocks, Igneous)

ZAIROV, D.Z.

Disturbed movements in a centrifugal regulator. Izv. AN UzSSR.
Ser. tekhn. nauk 8 no.6:80-82 '64.

(SIRA 13:3)

1. Institut mekhaniki AN UzSSR i Vychislitel'nyy tsentr AN UzSSR.

TERSEKIH, I.I.; ZAIROV, G.K.

Comparative studies on trachoma and ornithosis viruses. Report
No.1: Fluorescence microscopy data on tissue culture. *Vop.*
virus. 9 no.6:674-677 M-D '64. (MIRA 18:11)

1. Institut virusologii imeni D.I.Ivanovskogo AN SSSR, Moskva.

MASLIYEV, A.T., dotsent; URSOVA, L.G., kand.med.nauk; ZAIROV, G.K.

Cranio-cerebral trauma and its significance in the genesis of vascular diseases. Trudy 1-go MMI 21:147-154'63. (MIRA 16:9)

1. Kafedra psikhiatrii (zav. - prof. V.M.Banahchikov) 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

(BRAIN--WOUNDS AND INJURIES)
(SKULL--WOUNDS AND INJURIES)
(CEREBROVASCULAR DISEASE)

DANTLOV, A.I.; NOVIK, N.N.; ZAIROV, G.K.

Problems of virology at the 14th All-Union Congress of Micro-
biologists, Epidemiologists and Specialists in Infectious Diseases.
Vop. virus. 10 no.2:249-253. Mr.-Ap '65. (MIRA 18:10)

L 34987-66

ACC NR: AP6026154

SOURCE CODE: UR/0143/66/000/003/0093/0099

AUTHOR: Zairov, Kh. I.

ORG: Leningrad Polytechnic Institut im. M. I. Kalinin (Leningradskiy politekhnicheskiy institut)

TITLE: Damping of the kinetic energy below a spillway dam using a group of diffusing blades

SOURCE: IVUZ. Energetika, no. 3, 1966, 93-99

TOPIC TAGS: kinetic energy, waterway engineering

ABSTRACT: A description of an energy-absorbing mechanism for usage with spillway dams which is said to correspond to the requirements of absorption of excess kinetic energy in the water stream, without being subject to the cavitation corrosion of other designs. This design features blades which separate the water spilling down the dam into separate sheets. These sheets are then directed upward and downstream, colliding with each other in the air, or being absorbed by the surface of the downstream water, which coincided in some model experiments with the point of departure of the sheets of water from the blades. The device is said to significantly reduce the hydraulic pressure of the water below the dam on the bottom, which makes it especially suitable for high dams. It also produces no standing waves below the dam. Orig. art. has: 4 figures, 4 formulas, and 2 tables. [JPRS: 36,170]

SUB CODE: 13 / SUBM DATE: 22Nov65 / ORIG REF: 005

Card 1/1 B.L.G.

UDC: 627.814

ZAYROV, F. S.

Dissertation: "A Sanitary-Hygienic Appraisal of State Farm Fields Fertilized with 'Sharvat' in Uzbekistan." Cand Med Sci, First Moscow Order of Lenin Medical Inst, 21 Jun 54.
(Vechernyaya Moskva, Moscow, 11 Jun 54)

SO: SUM 318, 23 Dec 1954

ZAJROV, K.S.

Experiment in using the "sanitation number" as a chemical index
in the evaluation of soils in the Uzbek S.S.R. Gig.1 ser.no.2:
18-22 F '54. (MIRA 7:2)

1. Iz Uzbekskogo nauchno-issledovatel'skogo sanitarnogo instituta.
(Uzbekistan--Soils) (Soils--Analysis)

GUMAROVA, F.G.; GOSTEVA, A.G.; TULEGENOV, Z.K.; MAKASHEVA, S.U.; POLOSUKHIN, A.P.; MUSABEKOV, A.M.; DANILOV, Yu.S.; NIGMATULIN, M.A.; ZAKHAROV, F.G.; LUZINA, Z.T.; HEPESOV, T.I.; STASYUNAS, I.P.; ISABKHOV, O.I.; SARSENBAYEVA, K.; KATSYUBA, V.T.; LEHOVSKIY, A.S.; AEBICHDOV, K.Yu.; SUBKHANBERDIN, S.Kh.; KISLITSINA, N.P.; POLIKARPOV, S.V.; ZAIROV, K.S.; APSATAROV, A.A.; HOVOSEL'TSEV, V.N.; PETROV, N.N.; KHOMUTOV, N.V.; GALUSTYAN, A.S.; ARTYKOV, A.Ye.; DZHANDIL'DIN, N.D.; KOVRIGINA, M.D.; BRYSEBA YEV, M.; BUBLIK, V.N.; CHERNYSH, A.M.

Discussion on the report of S.R. Karynbaev, Minister of Public Health of the Kazakh S.S.R., on the status and improvement of medical care. Zdrav.Kazakh. 17 no.4/5 '57. (MIRA 12:6)

1. Zav. Alma-Atinskim oblastnym zdravotdelom (for Gumarova).
2. Vrach bol'nitsy g.Leninogorskya Vostochno-Kazakhstanskogo oblzdravotdela (for Gosteva).
3. Zav. Karagandinskim oblastnym otdelom zdravookhraneniya (for Tulegenov).
4. Zav. Kzyl-Ordinskim oblastnym otdelom zdravookhraneniya (for Makasheva).
5. Vitse-prezident AN KazSSR (for Polosukhim).
6. Zav. Aktyubinskim oblastnym otdelom zdravookhraneniya (for Musabekov)
7. Ministr zdravookhraneniya Kirgizii (for Danilov).

(Continued on next card)

GUMAROVA, F.G.---(continued) Card 2.

8. Zav. Vostochno-Kazakhstanskim oblastnym otdelom zdravookhraneniya (for Higmatulin). 9. Chlen kollegii Ministerstva zdravookhraneniya SSSR (for Zakharov). 10. Zav. Kustanayskim oblastnym otdelom zdravookhraneniya (for Luzina). 11. Ministr zdravookhraneniya Turkmenskoy SSR (for Hepesov). 12. Zav. sel'skim vrachebnym uchastkom Priirtyahskogo rayona Pavlodarskoy oblasti (for Stasyura). 13. Glavnyy vrach Kapal'skoy rayonnoy bol'nitsy Taldy-Kurganskoy oblasti (for Isabekov). 14. Zav. zhenotdelom Yuzhno-Kazakhstanskogo obkoma partii (for Sarsenbayeva). 15. Zav. Dzhambulskim oblastnym otdelom zdravookhraneniya (for Katsyuba). 16. Glavnyy vrach Alma-Atinskogo oblastnogo tuberkuleznogo dispansera (for Lenovskiy). 17. Ministr zdravookhraneniya Tadzhikskoy SSR (for Akhmedov). 18. Nachal'nik Kazaptekoupravleniya (for Subkhanberdin).

(Continued on next card)

GUMAROVA, F.G.---(continued) Card 3.

19. Zav. Senipalatinskim oblastnyy otdelom zdavookhraneniya (for Kislitsina). 20. Predsedatel' respublikanskogo komiteta soyuza medrabotnikov (for Polikarpov). 21. Zam. ministra zdavookhraneniya Uzbekskoy SSR (for Zairov). 22. Zav. Alma-Atinskim gorodskim otdelom zdavookhraneniya (for Apsatarov). 23. Zav. Severo-Kazakhstanakim oblastnym otdelom zdavookhraneniya (for Novosel'tsev). 24. Zav. rayzdavotdelom Shortandin-skogo rayona Akmolinskoy oblasti (for Petrov). 25. Zav. ministra zdavookhraneniya Soyuzo SSR (for Khomutov). 26. Zav. ministra zdavookhraneniya ArmSSR (for Galustyan). 27. Predsedatel' Komiteta fizicheskoy kul'tury i sporta pri Sovete Ministrov KazSSR (for Artykov). 28. Sekretar' Tsentral'nogo Komiteta Kommunisticheskoy partii Kazakhatana (for Dzhandil'din). 29. Ministr zdavookhraneniya Sovetskogo Soyuzo (for Kovrigina). 30. Parvyy zamestitel' predsedatelya Soveta Ministrov KazSSR (for Beysebayev). 31. Uchastkovyy vrach Kustanayskoy oblasti (for Rublik). 32. Zam. predsedatelya Obshchestva Krasnogo Kresta Kazakhatana (for Chernysh).

(KAZAKHSTAN--PUBLIC HEALTH)

ABDULLAYEV, I.I., kand.med.nauk., ZAIROV, K.S., LI GVAN-KHVA [LI KUANG-HUA]

Some features in the prevention of viral influenza. *Sci. zdrav.* 17
no.11:31-32 N'58 (MIRA 11:10)

1. Iz Khorezmskogo oblzdravotdela Uzbekskoy SSR.
(INFLUENZA, prev. & control.
in Russia (Rus))

Khorezm Oblast' Health Dept. Uz SSR

ZAIROV, K.S.; CHICHEMIN, P.I.; NEVSKIY, N.V.

Epidemiology of influenza in Uzbekistan during 1957. Zhur.
mikrobiol.epid. i immun. 30 no.5:25-30 My '59.

(MIRA 12:9)

1. Iz Ministerstva zdravookhraneniya Uzbekskoy SSR.
(INFLUENZA, epidemiol.
in Russia (Rus))

ZAIROV, K.S.; BOYKO, V.M.; IBADOV, A. U.

Status of and measures for the further improvement of health education in Uzbekistan. Med. zhur. Uzb. no.10; 3-8 0 '60.

(MIRA 13:12)

(UZBEKISTAN-HEALTH EDUCATION)

ZAYNOV, K. S., KOBLOVA, N. A., KUCHMA, K. I., SELITRENNIKOVA, I. D.
SHIKHURINA, YE. A.

"Hygienic norms for rendering harmless the refuse under
conditions of the Uzbekistan."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

ZAIROV, K.S.; KOBLOVA, N.A.; VEZHNEVETS, T.I.

Sanitary characteristics of the surface method of collecting impurities on the meadow soils of the desert zone irrigated since ancient times. Med. zhur. Uzb. no.7:18-22 J1 '63.
(MIRA 1712)

1. Iz Uzbekskogo nauchno-issledovatel'skogo instituta sanitarii, gigiyeny i professional'nykh zabolevaniy (dir. - dotsent A.Z. Zakhidov).

ZAIROV, K.S., kand. med. nauk

[Historical milestones in the elimination of smallpox in Uzbekistan; report at a conference devoted to diseases of tropical countries, September 1961, Tashkent] Istoricheskie etapy likvidatsii natural'noi ospy v Uzbekistane; doklad na konferentsii, posviashchennoi bolezniam v stranakh s zharkim klimatom, sentyabr' 1961 g., Tashkent. Moskva, Medgiz, 1961. 7 p. (MIRA 17:3)

*

ZAIROV, K.S., kand. med. nauk

Organizational, epidemiological and sanitary-hygenic aspects
in controlling infectious diseases in Uzbekistan. Med. zhur.
Uzb. no.4:12-20 Ap '63. (MIRA 17:4)

ZAIROV, K.S.; KOBLOVA, N.A.; KHAMZINA, D.I.

Characteristics of the sanitary state of the soil in the ancient cities of Khorezm, Khiva and Urgench. Med. zhur. Uzb. no.6: 35-41 Je'63
(MIRA 17:3)

1. Iz Uzbekskogo nauchno-issledovatel'skogo instituta sanitarii, gigiyeny i professional'nykh zabolevaniy.

SUKHOVA, M.N.; ZAIROV, K.S.; GVOZDEVA, I.V.; ANDREYEVA, A.I.; NURULLAYEV,
D.Kh.; TALPOV, M.Z.; MOSUNOV, V.B.; STOROZHEVA, Ye.M.; SAMEONOVA,
A.M.; SHAMIRZAYEV, N.Yu.; AKMURZAYEV, T.A.

Fly control and its organization in Uzbekistan. Med.zhnr.Uzb.
no.3:3-14 Mr '62. (MIPA 15:12)

1. Iz Tsentral'nogo nauchno-issledovatel'skogo dezinfektsionnogo
instituta Ministerstva zdavookhraneniya SSSR (dir. - prof.
V.I.Vashkov) i sanitarno-epidemiologicheskoy organizatsii
Uzbekistana (glavnyy gosudarstvennyy sanitarnyy inspektor-
kand.med.nauk K.S.Zairov).

(UZBEKISTAN--FLIES--EXTERMINATION)

ZAIROV, K.S.; BOYKO, V.M.; NEVSKIY, M.V.; CHICHENIN, P.I.

Some problems in the epidemiology of Botkin's disease in Uzbekistan.
Med. zhur. Uzb, no.2:19-23 F '60. (MIRA 15:2)
(UZBEKISTAN...HEPATITIS, INFECTIOUS)

ZAIROV, K/S.; SHRAYBERG, L.B.

Present-day problems of occupational pathology and the control of
certain occupational diseases in Uzbekistan. Med. zhur. Uzb. no.7:
3-9 J1 '61. (MIRA 15:1)

(UZBEKISTAN OCCUPATIONAL DISEASES)

ZAIROV, A.S., kand.med.nauk

Epidemiological and organizational prerequisites for the extermination
of malaria in Uzbekistan. Med. zhur. Uzb. no.8:8-17 Ag '61.

(MIRA 15:1)

(UZBEKISTAN MALARIA PREVENTION)

LITVINOV, N.N., prof., red.; ZAIROV, K.S., kand. med. nauk, red.;
CHAYKA, G.V., red.; TSAY, A.A., tekhn. red.

[Sanitary protection of the soil of inhabited areas in the
republics of Central Asia] Sanitarnaya okhrana pochvy naselennykh
mest v respublikakh Srednei Azii. Pod red. N.N.Litvinova i K.S.Zairo-
va. Tashkent, Medgiz UzSSR, 1961. 255 p. (MIRA 15:7)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut obshchey i
kommunal'noy gigiyeny. 2. Chlen-korrespondent Akademii meditsinskikh
nauk SSSR (for Litvinov).

(SOVIET CENTRAL ASIA--SOIL POLLUTION)
(SOVIET CENTRAL ASIA--SEWAGE DISPOSAL)

SAGATOV, H.S.; ZAIROV, K.S.; BOYKO, V.M.

Hygienic planning for populated areas and objectives in eliminating
some infectious diseases in Uzbekistan. Med. zhur. Uzb. no.3:3-9
Mr '62. (MIRA 14:5)

(UZBEKISTAN—PUBLIC HEALTH)

ZAIROV, K.S.

Docent A.Z.Zakhidov, Honored Physician of the Uzbek S.S.R. and Candidate
of the Medical Sciences; on his 50th birthday. Med. zhur. Uzb. no.8:
83-84 Ag '60. (MIRA 13:9)
(ZAKHIDOV, ABDULLA ZAKHIDOVICH, 1910-)

~~ZAIROV, Kayum Sabirovich, kand.med.nauk; GOLJEEV, M.P., red.; AGZAMOV, K.,
tekm.red.~~

[Hygienic aspects of soil disinfection and the utilization of
refuse in Uzbekistan] Sanitarnye uslovia pochvennogo obezvrezhi-
vania i ispol'zovaniia nekotorykh otbrosov v Uzbekistane. Tashkent,
Gos.med.izd-vo UzSSR, 1960. 176 p. (MIRA 14:3)
(Uzbekistan--Sewage irrigation--Hygienic aspects)

ABDULIYEV, I.A.; ZAIROV, K.S., kand.med.nauk; **LIGVANKOVA, V.T.**

Some problems in the organization of control measures for
virus influenza in Khorezm Province. Med.zhur.Uzb. no.5:
50-52 My '58. (MIRA 13:6)

(KHOREZM PROVINCE--INFLUENZA)

ZAIROV, K.S., starshiy nauchnyy sotrudnik; NEVSKIY, M.V., kand.med.nauk;
CHICHENIN, P.I.

Incidence of diphtheria in Uzbekistan. Med.shur.Uzb. no.11:
21-24 N '58. (MIRA 13:6)

(UZBEKISTAN--DIPHTHERIA)

ZAIROV, K.S., starshiy nauchnyy sotrudnik; NEVSKIY, M.V., kand.med.nauk;
CHICHENIN, P.I.

Organization of control measures for virus influenza in Uzbekistan
in 1957. Med.shur.Uzb. no.8-9:90-94 14-8 '58. (MIRA 13:6)
(UZBEKISTAN--INFLUENZA)

ZAIROV, K.Z., inzh.

Alloying wear-resistant tungsten hard facing with the help
of a scheelite concentrate. Svar. profiz. no.11:21-22 N'63.
(MIFA 17:5)

1. Ministerstvo proizvodstva i zagotovok sel'skokhozyaystvennykh
produktov USSR.

S/123/62/000/019/004/010
A006/A101

AUTHOR: Zairov, K. Z.

TITLE: Hardfacing with wear-resistant alloyed metal without ferroalloys

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye; no. 19, 1962, 30,
abstract 19B166 ("Mekhaniz. khlopkovodstva", 1962, no. 1, 15 - 17)

TEXT: For alloying hardfaced metal it is proposed to add to the charge powderlike scheelite ore concentrate (CaWO_4) crushed to less than 0.1 mm grain size; it is recommended to use carbon (graphite, naphtha coke) ferrosilicon, silicon carbide and their mixture as reducing agents. A hardfacing method is proposed with simultaneous supply of several electrodes to the arc zone; the electrodes are arranged in one line at 3 - 5 electrode diameters distance between each other. The investigated hardfacing method makes it possible to use scheelite concentrates instead of ferrotungsten. There is 1 figure. ✓

[Abstracter's note: Complete translation]

T. Kislyakova

Card 1/1

VALIKHAN, S.I.; ZAIROVA, P.G.

Clinical aspects and treatment of malignant exophthalmos.
Azərbaycan. med. xəb. no.9:51-56 3 '65. (MEDA 18:11)

VALIKHAN, S.I.; ZAIROVA, P.G.

Problem of Harada's disease. Azerb. med. zhur. 42 no.3:
79-81. Apr '65.

(MIRA 18-6)

ZAITEV, I. P. [Zaytsev, I. P.]

Pelagic biocoenosis of the surface of the Black Sea. *Anslele biol* 15
no.6:127-136 N-D '61.

VOJTA, M.; LAITL, J.; ZAITLIK, V.

Local application of stilbenes before operating on descending
genitalia in older women. Cas. lek. cesk. 99 no.27:851-855
1 JI '60.

1. Ustav pro peci o matku a dite, Praha-Podoli, reditel. doc.
dr. M. Vojta.
(UTERINE PROLAPSE surg.)
(STILBENES ther.)

ZAITLIK, V.

Position during vaginal operations. Cesk. gyn. 23[37] no.7:563-565 Oct 58.

1. UPMD, Praha-Podoli, reditel prof. Dr J. Trapl.
(VAGINA, surg.
position, technic (Cz))

KAZDA, Stanislav; LAITL, Josef; ~~ZAITLIK, Vojtech~~

On anesthesia for artificial interruption of pregnancy. Cesk.gyn.
25[39] no.9:672-677 N '60.

1. Ustav pro peci o matku a dite, Praha-Podoli, reditel doc. dr.
M. Vojta, zasl. lekar CSSR.
(ABORTION THERAPEUTIC anesথে & analg)

26.2421

18 8100 1164, 1160. #45

28317

S/112/60/000/010/001/004
A052/A101

AUTHOR: Zaitov, F.

TITLE: Thermoelectric effect in thin antimony and bismuth films

PERIODICAL: Referativnyy zhurnal. Elektrotehnika, 1960, no. 10, 13, abstract
1. 2764. (Sb. Nauchn. rabot stud. Kirg. un-t, 1959, no. 2, 27 - 31) X

TEXT: For producing thin-film thermoelectric cells, it is important to know the dependence of the magnitude of thermoelectromotive force on the thickness of layers forming the cell. Thin Bi and Sb films were produced by evaporating in vacuum. Junctions of Sb and Bi films of various thickness were obtained on the same glass plate, whereupon Bi and Sb were dusted. Measurements have shown that thermoelectromotive force depends most distinctly on the thickness of the Bi-layer. When the latter grows thinner the thermoelectromotive force decreases, reaches zero and then changes its sign. The effect of the thickness of the Sb-layer on the thermoelectromotive force is indefinite. Within the range of the investigated thicknesses the resistance of the thermoelectric cells varied from 200 ohms for composing thick Bi-layers to 90 kilohms for small thicknesses (the film width being 1 cm); it is possible without any particular difficulty to ob-

Card 1/2

Thermoelectric effect in thin antimony and....

20317

S/112/60/000/010/001/004
A052/A101

tain a battery of series-connected thin-film thermocouples with the total internal resistance of 10^6 ohms. There are 5 references.

[Abstracter's note: Complete translation]

V.S.K.

X

Card 2/2

ZAITOV, F., student IV kursa

Thermoelectric effect in thin films of antimony and bismuth. Sbor.
nauch.rab.stud. Nauch.stud.ob-va Kir.un. no.2:27-31 '59.
(MIRA 13:7)

1. Fiziko-matematicheskiy fakul'tet Kirgizskgo gosudarstvennogo
universiteta.
(Antimony) (Bismuth) (Metallic films)

ZAITOV, F.

PHASE I BOOK EXPLOITATION

SOV/4303

Frunze. Universitet. Nauchnoye studencheskoye obshchestvo

Sbornik nauchnykh rabot studentov, vyp. 2 (Collection of Scientific Works of Students, No. 2) Frunze, 1959. 99 p. 500 copies printed.

Sponsoring Agency: Kirgizskiy gosudarstvennyy universitet. Nauchnoye studencheskoye obshchestvo.

Resp. Ed.: L. A. Spektorov, Docent; Tech. Ed.: N. A. Yefimov.

PURPOSE: This book is intended for mathematicians, natural scientists, and philologists.

COVERAGE: The collection of articles contains studies in mathematics and mechanics, physics, biology, and philology written by members of the Nauchnoye studencheskoye obshchestvo (Students' Scientific Association) of Kirgizskiy gosudarstvennyy universitet (Kirgiz State University) under the guidance of faculty members. References accompany each article.

~~Card 3/6~~

Collection of Scientific Works (Cont.)

SOV/4303

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Faynberg, Ye. (Third-Year Student of the Division of Physics and Mathematics. Professor F. I. Frankl', Scientific Adviser). Adiabatic Flow of Van der Waals Gases in Pipelines 19

PHYSICS

Zaitov, E. (Fourth-Year Student of the Division of Physics and Mathematics. Docent L. A. Spektorov, Scientific Adviser). Thermoelectric Effect in Fine Films of Antimony and Bismuth 27

~~Car 2/6~~

С А Т Т О В , F. N.

24(4) PHASE I BOOK ABSTRACTS SOV/3140
 Akademiya nauk Ukrainy SSR, Institut fiziki
 Fotoelektricheskiya i opticheskiya yavleniya v poluprovodnikakh i opticheskiy veshchivomogo svoystvennyy, po fotoelektricheskoy moyabrya 1959 g. (Photoelectric and Optical Phenomena in Semiconductors 1959) (Photoelectric and Optical Phenomena in Semiconductors and Optical Phenomena in Semiconductors...), Kiev, 1959. 803 p.
 Additional Sponsoring Agency: Akademiya nauk SSSR, Fizmatlab.
 Komissiya po poluprovodnikam.
 Ed. of Publishing House: I. V. Kisina; Trans. Ed.: A. A. Matveyevuk; Resp. Ed.: V. Ye. Leabakov, Academiya, Ukrainlan SSR, Academy of Sciences.

PURPOSE: This book is intended for scientists in the field of semiconductor physics, solid state spectroscopy, and semiconductor materials. The collection will be useful to advanced students in universities and institutes of higher technical training specializing in the physics and technical application of semiconductors.

COVERAGE: The collection contains reports and information bulletins (the latter are indicated by asterisks) read at the First All-Union Conference on Optical and Photoelectric Phenomena in Semiconductors. A wide series of problems in semiconductor physics and technology are considered: photoconductivity, photoelectric motive forces, optical properties, photoelectric cells and photoconverters, the actions of ions and corpuscular radiations on the properties of thin films and composite semiconductor systems. The materials were prepared for publication by E. I. Babich, O. V. Saliko, K. B. Tolpygo, A. P. Zhuravskiy, and R. K. Shcherbakov. References and discussion follow each article.

Photoelectric and Optical Phenomena (Cont.) SOV/3140

Gerasimov, P. P., P. F. Zakharenko, and R. P. Firinitskiy. Magnetic Levels of an Exciton (thesis) 199

Zakharenko, P. F. Photoelectric Properties of a Metal-Semiconductor Contact 194

Andriyevskiy, A. I., K. V. Bilik, and A. I. Frankel. The Effect of Nickel and Iron Impurities on the Photoelectric Properties of Cuprous Oxide 196

Andriyevskiy, A. I., and A. I. Rybachek. The Phenomenon of Photoelectric "Fatigability" (Sensitivity Examination) in Cuprous Oxide 164

Kochanin, Yu. J., and G. P. Foka. The Effect of an Ionic Electric Field on the Luminescence of Cuprous Oxide 173

Lushchik, Ch. B., P. I. Saliko, and G. G. Uspenskiy. Spectrophotometric Investigation of Electron-Hole and Exciton

Photoelectric and Optical Phenomena (Cont.) SOV/3140

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Buzashvili, E. I. Negative Photoconductivity of Selenium Photoelectric Cells With Positive Sign of the Photoelectromotive Force 191

Prilimov, N. T., and B. Y. Pavlov. Displacement of the Edge of the Absorption Band in Various Semiconductors of the System $As_2S_3-As_2Se_3$ 201

Tartakov, V. K., and A. M. Soloviyev. "Electromagnetic" (Combined Electro-Microscopic and Radiographic) Investigation of the Composition of Lead Sulfide Photoconverters According to the Thickness of Their Layers 207

Zaitov, F. N.

USSR/Physical Chem. Crystals

B-5

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22128

Author : Ch. B. Lushchik, F. N. Zaitov

Inst : Not given

Title : Relaxation processes in phosphors with a complex spectrum of penetration levels.

Orig Pub : Tr. In-ta fiz, Astron. AN Est SSR, 1956, No 4, 53-80

Abstract : Thermal decolorization and thermo-optic luminosity in the system of impulse heating are the object of this study in order to permit an examination of the distribution of electrons (E) and holes on the levels of penetration. Stimulated phosphor is submitted to constant heating until it reaches a temperature T_1 and then it is quickly cooled to T_0 . At T_0 the spectrum of absorption of stimulated phosphor or the spectrum of stimulation of the optical flash are measured. After that the temperature again is quickly increased to T_1 then the phosphor is submitted to constant heating up to T_2 . At that point the temperature is rapidly lowered to T_0 and so on. The examination of the absorption of the stimulated KCl-CaCl₂-AgCl and NaCl-AgCl showed that the distribution of E and

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-43-

Physical Chem. Crystals

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22128

B-5

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963430003-2"

changes sharply during the process of relaxation. By optical and thermic liberation of E the probability of repeated localizations is less than that of recombination. Thermic decolorization of F and V₂ centers in NaCl containing only these electron and hole levels of penetration, is proceeding in accordance with this same reaction of the first order. In conclusion, the complexity of the relaxation processes in real phosphors is caused by changes in the distribution of electrons and holes on penetration levels by relaxation. This allows to determine the upper limit of the energy of the thermal ionization of the 2p-conditions of F-centers in roentgenized NaCl (<0.3 ev).

Card 2/2

-44-

ZAITOV, F.^N; KARK, V.

"A complex investigation of the trapping centers in alkali halide crystallophosphors with bivalent impurities."

p. 82 (Uurimused, Trudy) No. 6, 1957
Tartu, Estonia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

ZAITOV F.N.

48-5-27/56

SUBJECT: USSR/Luminescence

AUTHORS: Lushchik, Ch.B., Zaitov, F.N., Kark, V.Ya., Teyss, L.A. and Yaek, I.V.

TITLE: Investigation of Capture Centers and Kinetics of Relaxation Processes in Alkali-Haloid Crystallophosphors (Issledovaniye tsentrov zakhvata i kinetiki relaksatsionnykh protsessov v shchelochno-galoidnykh kristallofosforakh.)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #5, pp 693-694 (USSR)

ABSTRACT: The role of capture centers of various types in recombinational luminescence of alkali-haloid crystallophosphors was studied by several methods. Capture centers of a basic substance (F, F¹¹, M, O, P, etc) and capture centers created by bi-valence admixtures Ca²⁺ and Sr²⁺ are manifested in thermal de-luminescence and optical flash. The number and main characteristics of these centers can be considerably changed by means of plastic deformation and temperature treatment.

The effect of several activators (Ag⁺, Cu⁺, Tl⁺, Fb²⁺ and Mn²⁺) on the spectrum of excited absorption, thermal de-luminescence and thermal decolorization of phosphors based on NaCl and KCl

Card 1/2

48-5-27/56

TITLE: Investigation of Capture Centers and Kinetics of Relaxation Processes in Alkali-Haloid Crystallophosphors (Issledcvaniye tsentrov zakhvata i kinetiki relaksatsionnykh protsessov v shchelochno-galoidnykh kristallofosforakh.)

was investigated. Especially many electrons are stored in phosphors with two activators (e.g., NaCl-Ca²⁺, Ag⁺). Activator capture centers are also manifested in recombinational luminescence, but their existence is often disguised by temperature quenching.

The distribution of electrons and holes over capture levels essentially changes during the processes of decay and flash.

This distribution, which is established in the result of a lasting excitation by X-rays, is not a temperature equilibrium one. The degree of filling capture levels by electrons can be as high as 30 %, but is not complete. The report was followed by a discussion. One Russian reference is cited.

INSTITUTION: Institute of Physics and Astronomy of the Estonian Academy of Sciences and Tartu State University.

PRESENTED BY:

SUBMITTED: No date indicated.

AVAILABLE: At the Library of Congress.

Card 2/2

~~SAITOV, E.N.~~

Thermo-optical liberation of electrons from trapping levels in
alkali halide phosphors. Opt. i spektr. 4 no.1:102-104 Ja '58.
(MIRA 11:3)

1. Institut fiziki i astronomii AN ESSR, g. Tartu.
(phosphors) (Electron emission)

SIDLYARENKO, V.I.; ZAITOV, F.N.; LUKANTSEVER, Yu.I.

Existence of F-centers with different thermal stability in alkali
halide phosphors. Opt. i spektr. 13 no.1:143-144 JI '62.
(MIRA 15:7)

(Alkali metal halides--Thermal properties) (Phosphors)

LUKANTSEVER, Yu.L.; ZAITOV, F.N.

Allowing for reabsorption in spectrophotometry. Izv. vys. ucheb.
zav.; fiz. no.4:158-163 '64 (MIRA 17:8)

1. Oshskiy pedagogicheskiy institut.

ZAITOV, F.N.; LUKANTSEVER, Yu.L.; SIDLYARENKO, V.I.

Use of microscopic techniques in studying the production and breakdown of color centers in NaCl single crystals. Izv. AN SSSR. Ser.fiz. 29 no.3:449-453 Mr '65.

(MIRA 18:4)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut KirgSSR.

ZAITOV, F.N.

Stability of F color centers in alkali halide crystal phosphors.

Uch. zap. Osh. gos. ped. inst. no.5:109-116 '63.

(MIRA 18:2)

L 08:60-67 EWT(1) IJP(c)

ACC NR: AR6028135

SOURCE CODE: UR/0058/66/000/005/D058/D058

AUTHOR: Dudarev, Ye. S.; Zaitov, F. N.; Lukantsever, Yu. L. 45

TITLE: Interaction of photoexcited F centers with crystal lattice microdefects in a NaCl-Ag crystal phosphor

SOURCE: Ref. zh. Fizika, Abs. 5D446

REF. SOURCE: Tr. Frunzensk. politekhn. in-ta, vyp. 22, 1964, 62-68

TOPIC TAGS: F band, color center, crystal lattice defect, crystal phosphor, activated crystal, photoeffect, thermal effect

ABSTRACT: The authors investigate experimentally the thermal and photochemical destruction of F color centers in NaCl-Ag phosphors. Assuming that the ionic mechanism of the processes plays an important role, the authors consider the theoretical curves of thermal discoloring and photothermal discoloring. The experiment is in satisfactory agreement with the theory. Several kinetic parameters of the indicated processes are estimated. For part I see RZhFiz, 1966, 4D492. [Translation of abstract]

SUB CODE: 20

Card 1/1 nat

L 08362-67 EWF(m)/EWP(t)/ETI IJP(o) JD/JC

ACC NR: AR6028137

SOURCE CODE: UR/0058/66/000/005/D088/D088

AUTHOR: Zaitov, F. N.; Lukantseyer, Yu. L. 65

TITLE: Possibility of obtaining stimulated emission in recombination processes in alkali-halide crystal phosphors

SOURCE: ^{v1} Ref. zh. Fizika, Abs. 5D691

REF. SOURCE: Tr. Frunzensk. politekhn. in-ta, vyp. 22, 1964, 69-73

TOPIC TAGS: stimulated emission, alkali halide, crystal phosphor, electron re-combination, irradiation, electron capture, laser pumping

ABSTRACT: The authors consider the possibility of obtaining stimulated emission in alkali-halide crystal phosphors exposed to different types of radiation (short-wave uv, x rays, γ rays, charged particles). The stimulated emission produced in centers connected with the capture of free electrons and holes produced in the crystals by the irradiation, or in color centers produced by capture of electrons freed from different types of capture centers destroyed by thermal and photo-thermal action. The calculation shows that the minimum "pump" power needed for the generation of stimulated emission is 10^{20} quanta-cm⁻² sec⁻¹ for a crystal 2 cm long if 90% of the x-ray quanta incident on it are absorbed and if the crystal end surfaces have a reflection coefficient of 0.9. In the authors' opinion, the proposed "pumping" method

Card 1/2

L 08362-67

ACC NR: AR6028137

has advantages since it makes it possible to use sources of "hard" radiation and readily available alkali-halide crystal phosphors. V. Vasil'yev. [translation of abstract]

SUB CODE: 20

Card 2/2 net

CHERNENKO, V.P.; ZAITOV, F.N.; LUKANTSEVER, Yu.L.

Mechanism underlying the breakdown of color centers and
recombination luminescence in the crystal phosphor
NaCl-Ag, Ca. Part 2. Izv. vys. ucheb. zav.; fiz. 8 no.6:
43-47 '65. (MIRA 19:1)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut. Submitted
June 17, 1963.

L 22457-66 EWT(m)/E/EWP(t) IJP(c) JD/JG

ACC NR: AP6009148 SOURCE CODE: UR/0139/65/000/005/0097/0101

AUTHORS: Sidlyarenko, V. I.; Zaitov, F. N.; Lukantsever, Yu. L. 35

ORG: Osha State Pedagogical Institute (Oshskiy pedagogicheskiy institut) 32

TITLE: Investigation of processes involving the creation and destruction of color centers in alkali-halide crystals by microscopic methods 27

SOURCE: IVUZ. Fizika, no. 5, 1965, 97-101

TOPIC TAGS: alkali halide, color center, x ray effect, single crystal, sodium chloride, fiber crystal

ABSTRACT: The authors investigate the production of K and M color centers by x rays in different microscopic regions of single-crystal alkali halide compounds. The objects of the investigation were synthesized NaCl single crystals, natural NaCl single crystals from different sources, and elementary NaCl crystals. The laws of the thermal destruction of color centers in the same microscopic

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L 22457-66

ACC NR: AP6009148

sections of the crystal were investigated by the authors earlier by a method of microscopic thermal discoloring (microdiscoloring) (izv. vuzov SSSR, Fizika, no. 2, 42, 1963 and no. 5, 50, 1963). The present study was by a method developed for this purpose, called the micro-coloring method, consisting of photographing the same sections of the single crystals (with linear dimensions $l = 5 \times 10^{-2}$ cm) during the course of the x ray exposure at the maxima of certain absorption bands. The apparatus for the microphotography was described in the earlier work. The method makes it possible to trace the formation of color centers in sections with linear dimensions $\sim 10^{-3}$ mm. The x-ray exposures range from 90 to 240 minutes, depending on the type of crystal and on the type of centers. The color-center destruction was by means of uniform heating and was investigated by the microthermal discoloring method. The use of both microscopic methods (microcoloring and microdiscoloring) permits a study, on the one hand, of the formation and destruction of the color centers in one and the same section of the single crystal, and on the other hand, comparison of the laws governing the coloring and discoloring in microscopy.

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ACC NR: AP6009148

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sections with different locations in the crystal. The results show that the increase in the degree of destruction of the regular crystal lattice of NaCl under various influences distorts both the x-ray and neutron diffraction curves. The higher the perfection of the crystal the more regular the curves. It is concluded that a more detailed investigation by microscopic means is necessary to determine the interaction processes in alkali-halide crystal phosphors. The authors thank Doctor Ch. B. Lushchik, M. A. Elango, and R. I. Gandina for valuable discussions and for supplying several of the crystals for the investigation. Orig. art. has: 5 figures

SUB CODE: 20/ SUBM DATE: 20Apr63/ ORIG REF: 011/ OTHER REF: 006

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23240-66 EWT(i) IJP(c)

ACC NR: AP6009151

SOURCE CODE: UR/0135/65/000/005/0145/0152

AUTHOR: Chernenko, V. P.; Lukantsever, Yu. L.; Zaitov, P. N.

ORG: Osha Pedagogical Institute (Oshakiy pedagogicheskiy institut)

TITLE: Investigation of the mechanism of destruction of color centers and of non-stationary recombination luminescence of the crystal phosphor NaCl-Ag. I

SOURCE: IVUZ. Fizika, no. 5, 1965, 145-152

TOPIC TAGS: crystal phosphor, color center, recombination luminescence, silver chloride, absorption spectrum, emission spectrum, luminescence spectrum

ABSTRACT: This is a continuation of earlier work (Optika i spektroskopiya v. 15, 86, 1963) on thermoluminescence in synthetic NaCl-Ag crystal phosphor. The present article continues the investigation of nonstationary luminescence spectra, thermoluminescence, and thermal discoloring in a wider range of temperatures (from 100 to 550K). The NaCl-Ag crystal phosphor was grown from the melt and excited with x rays at exposures ranging from 30 to 240 minutes. A specially designed cryostat described elsewhere by one of the authors (Lukantsever, Dissertation, Tomsk, 1959) was used for the low-temperature measurements. The absorption spectra at all temperatures, and the integral thermoluminescence and thermal discolor-

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ACC NR: AF6009151

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ing of the crystals at various temperatures were recorded with a photometer consisting of a photomultiplier (FEU-29), a dc amplifier and an automatic recording potentiometer (EPP-09). The emission spectra were registered with a photometer consisting of a photomultiplier, dc amplifier, and a loop oscilloscope. In addition, a composite technique was used to investigate the destruction of the 355-, 465-, and 720-nm color centers of the phosphor. The spectra were found to vary greatly with the x-ray dose and with the prior heat treatment of the sample. The nature of the different centers is analyzed and the possibility of non-electron and ion-hole mechanisms for their destruction at low temperatures is discussed. The authors thank Doctor of Physicomathematical Sciences Ch. B. Lushchik for a discussion of problems touched upon in the article and Yu. N. Yevs: Feyev for help with the experiment. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 20/ SUBM DATE: 15MAR/63/ ORIG REF: 014/ OTH REF: 004

Card 2/2 MJS

L 28323-66 ENT(1)

ACC NR: APE013087

SOURCE CODE: UR/0048/68/030/004/0704/0706

AUTHOR: Zaitov, F.N.; Lukantsever, Yu.L.; Dudarev, Ye.S.

ORG: Luminescence Laboratory, Osh State Pedagogical Institute (Laboratoriya luminescentii Oshskogo gosudarstvennogo pedagogicheskogo instituta)

TITLE: Concerning the ionic mechanism of activation of photothermal destruction of color centers in alkali halide crystal phosphors /Report, Fourteenth Conference on Luminescence held in Riga 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 704-706

TOPIC TAGS: color center, alkali halide, crystal phosphor, sodium chloride, electron

ABSTRACT: One of the effective processes of release of electrons and, consequently, of the light sum stored in an excited phosphor is destruction of the color centers under the simultaneous influence of two factors, for example, light and heat (photothermal destruction). By analogy with the ionic mechanism of thermal destruction of color centers it was hypothesized that ionic processes also play a significant role in photothermal destruction of F centers. However, the actual process may be somewhat different owing to the fact that the destroying ions may interact with the photoexcited color centers. The present experimental investigation of photothermal destruction of F centers was carried out on NaCl:Ag, NaCl:Tl, NaCl:Sr and NaCl crystals. The results for NaCl:Ag are presented in graphic form. It is evident from the results

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ACC NR: AP6013087

that photothermal destruction of F centers occurs at lower temperatures than purely thermal destruction of these centers. This indicates that in the investigated temperature range the destroying ions interact with the photoexcited centers more effectively than with the unexcited ones. Thermal and photothermal destruction of F centers is accompanied by emission, i.e., the luminescence occurs in the same temperature interval as destruction of the color centers. This indicates that the products of ionic decay of photoexcited F centers are unstable in the given temperature region and are ionized. The electrons released in the process participate in the luminescence process. Similar results were obtained for NaCl:Tl. The results obtained for NaCl:Sr and "pure" NaCl, however, were somewhat different. In the case of these crystals recombination luminescence is not observed in the temperature range of photothermal destruction of F centers. Ionization and hence luminescence become evident at higher temperatures. By processing the experimental curves for thermal and photothermal bleaching there were deduced the values of some of the parameters of the ionic processes of destruction of F centers; the inferred values are listed in a table. It is noted that the photothermal procedure can be used for destruction at moderate temperatures of color centers that are characterized by relatively high thermal stability. Orig. art. has: 1 formula, 1 table and 2 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 013/ OTH REF: 001

Card 3/2 *ll*

L 47404-56 EWT(m)/T/EWP(t)/ETI IJP(c) JG/JD

ACC NR: AR6025773

SOURCE CODE: UR/0058/66/000/004/DO64/DO64

AUTHOR: Sdudarev, Ye.; Zaitov, F. N.; Lukantsever, Yu. L.

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TITLE: On the interaction of photoexcited F-centers with microdefects of the lattice in NaCl-Ag crystal phosphor. I.

SOURCE: Ref. zh. Fizika, Abs. 4D492

55
B

REF. SOURCE: Tr. Frunzensk. politekhn. in-ta, vyp. 22, 1964, 54-61

TOPIC TAGS: color center, light excitation, crystal lattice defect, activated crystal, sodium chloride, luminor, thermal optic effect

ABSTRACT: A calculation is presented of the kinetics of thermal and photothermal discoloring of F centers. It is proposed that the unexcited or photoexcited F center disappears, combining with the neighboring impurity ion to form new center. The impurity ions diffuse in the lattice and can be captured not only by F centers but also by other defects. The values of the activation energies of the reaction of the excited and unexcited F-centers with the destroying ion are different. Formulas are presented for the change in the concentration of the F-centers under uniform heating for illuminated and non-illuminated colored crystals. V. Pisarenko [Translation of abstract].

SUB CODE: 20

Card 1/1 ns

ACC NR: AP7004979

SOURCE CODE: UR/0048/66/030/009/1479/1482

AUTHOR: Lukantsever, Yu.L.; Zaitov, F.N.; Sidlyarenko, V.I.

ORG: Osh State Pedagogical Institute of the KirgSSR (Oshskiy gosudarstvennyy pedagogicheskiy institut KirgSSR)

TITLE: Influence of microdefects on the thermal stability of γ centers in alkali halide crystal phosphors /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 9, 1966, 1479-1482

TOPIC TAGS: sodium chloride, luminescent crystal, color center, lattice defect, ion interaction, thermal effect, *THERMAL STABILITY, ALKALI HALIDE*

ABSTRACT: There is given a brief theoretical discussion of the thermal bleaching of color centers in alkali halide phosphors based on the hypothesis that the bleaching is effected by ions that can also be captured by trapping centers associated with lattice defects. The calculations involve the simplifying assumption that the probability for the interaction of an ion with a trapping center is much greater than that for its interaction with a color center. An equation is obtained relating the temperature T_1 at which the rate of thermal bleaching is maximum to the energy $u = Q_v + Q_f - Q_t$, the frequency of lattice ion vibrations in the vicinity of a color center, the rate of heating of the crystal, and the quantity $n/\gamma N$, where Q_v is the activation energy for

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movement of an ion through the lattice, Q_T is the activation energy for interaction of an ion with an F center, Q_t is the activation energy for interaction of an ion with a trapping center, n is the concentration of the ions that interact with the trapping and color centers, N is the concentration of trapping centers and γ is the ratio of the interaction cross section of a trapping center to that of a color center. The relation between T_M and u is involved and not even necessarily single valued. Experiments with NaCl crystals containing different activators revealed a wide range of T_M values and values of $n/\gamma N$ for only a small range of u values. The thermal bleaching curve of each of these crystals gave a linear relation between $\log(dn_F/n_F dT)$ and $1/T$, where n_F is the F center concentration and T is the temperature. The experimental thermal bleaching curves were in good agreement with the theory even under conditions in which the essential simplifying assumption concerning the relative probabilities of bleaching and trapping appeared not to be satisfied. It is suggested that N , which was taken as the dislocation concentration, was underestimated and that other lattice defects also contribute to the trapping. Orig. art. has: 6 formulas, 3 figures and 1 table.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 006 OTH REF: 002

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